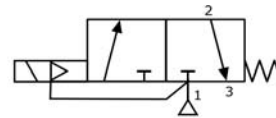


REMOTE
MOUNTED

pneumatrol
A ROSS CONTROLS Company

E13--C Series, 1/8", 3/2 Function Solenoid Valve



DESCRIPTION

3 port 2 position, pilot operated solenoid valve.

Hazardous area approved pilot operators (ExnA, Ex e mb, Exd and Exia) are available with various international approvals – ATEX, IECEx, FM, GOST CU TR (Russia) and NEPSI (China).

Body material available in

- Aluminium (standard)
- Stainless Steel
- Brass

Seal kit available – VSK100

FEATURES

- External or internal pilot air connection
- Single coil spring return function or double coil stay put function
- Convenient fixing holes to enable bracket mounting
- Pilot exhaust dust caps fitted as standard
- Interchangeable CNOMO interface coil units, including hazardous area options
- SIL 2 Capable (De-energise to trip @ HFT=0) SIL 3 Capable (De-energise to trip @ HFT=1)

PRODUCT CODE:

E 1 3

C
OPERATOR

OPTIONS 1

0
COIL

DESIGNATOR

0
VOLTAGE

OPTIONS 2

SEE BELOW FOR
PRODUCT CODE
DETAILS

Any of the below options that
are not required enter '0' in
relevant box.

Operator

- | | | |
|---|---|--|
| 1 | 8 | Spring return, internal pilot air feed |
| 8 | 0 | Spring return, external pilot air connection |
| 1 | 9 | Double solenoid, internal pilot air feed |
| 9 | 0 | Double solenoid, external pilot air connection |

Coil

- | | |
|---|---------------------------------|
| A | Exia |
| B | Terminal Box |
| D | Exd |
| H | Plug & Socket Exia |
| K | MC30 Plug & Socket |
| L | MC30 Plug & Socket with LED |
| P | Plug & Socket |
| S | Exia Stainless Steel Housing |
| Y | ExnA Plug & Socket |
| 4 | Stainless Steel Housing |
| 5 | ExnA Stainless Steel Housing |
| 8 | Ex e mb Stainless Steel Housing |

Options 1

- | | |
|---|-----------------------------|
| C | Lever manual override |
| D | Push button manual override |
| S | Screw driver override |
| 0 | No option required |
- * Not SIL approved with manual override options**

Standard Voltage

- | | |
|---|---------------------------------|
| B | 24v DC |
| H | 24v DC Low Power ⁽¹⁾ |
| R | 24v AC (50/60 Hz) |
| T | 110v AC (50/60 Hz) |
| N | 220v AC (50/60 Hz) |
| U | 240v AC (50/60 Hz) |

*** A comprehensive range of non-standard voltages available on request**

Note:

- (1) "H" option not available with Exia solenoids
(2) IECEx only available with Exia and Exd Solenoids
(3) GOST CU TR only available with Exd solenoids
(4) NEPSI only available with Exia and Exd solenoids

Designator

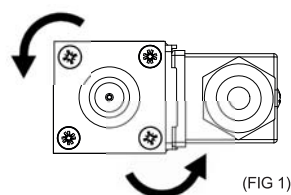
- | | |
|---|--------------------------------|
| A | ATEX / IECEx ⁽²⁾ |
| B | ATEX / IECEx ^(10mA) |
| F | FM / CSA |
| G | ATEX Exd IIB |
| J | ATEX Ex e mb |
| R | GOST CU TR ⁽³⁾ |
| X | NEPSI ⁽⁴⁾ |

Options 2

- | | |
|---|--|
| B | Valve body brass |
| C | Valve body brass and NPT ports |
| D | Valve body brass, NPT ports and 1/2" NPT electrical connection |
| E | 1/2" NPT electrical connection |
| M | NPT ports and 1/2" NPT electrical connection |
| N | NPT ports |
| P | Valve body stainless steel, NPT ports and 1/2" NPT electrical connection |
| R | Valve body stainless steel and NPT ports |
| S | Valve body stainless steel |

*** A comprehensive range of non-standard options available on request**

The coil itself can be rotated in 90° steps by releasing the four securing screws. (FIG 1) When rotating the coil care should be taken to ensure the core assembly (core, spring, seal and washer) remains intact and aligned correctly. This is easily achieved by only lifting the coil the small amount required to clear the screws enabling the coil to be rotated.



The technical drawing illustrates the 1000 Series Solenoid Valve in two views: a front view (top) and a side view (bottom).

Front View (Top):

- Overall width is labeled **'D'**.
- Distance from the left face to the center of the coil is labeled **'C'**.
- Coil width is labeled **'A'**.
- Coil is labeled **COIL**.
- Three solenoid ports are shown with diameters of **19** and **ø5.5**.
- Ports are labeled **1**, **2**, and **3**.
- Distance between the center of the coil and the first solenoid port is **19**.
- Distance between the first and second solenoid ports is **19**.
- Distance between the second and third solenoid ports is **19**.
- Distance from the center of the third solenoid port to the right face is **19**.
- Right face is labeled **DOUBLE COIL POS'N**.

Side View (Bottom):

- Overall height is labeled **'B'**.
- Coil is labeled **COIL**.
- Distance from the top face to the center of the coil is **22**.
- Distance from the top face to the center of the solenoid port is **18**.
- Distance from the center of the solenoid port to the right face is **29**.
- Distance from the center of the solenoid port to the right face is **44**.
- Distance from the center of the solenoid port to the right face is **6**.
- Right face is labeled **DOUBLE COIL POS'N**.
- Label **G 1/8** points to the solenoid port.
- Label **OPTIONAL MANUAL OVERRIDE** points to the solenoid port.
- Label **G 1/8 EXTERNAL PILOT VALVE ONLY** points to the solenoid port.
- Overall width is labeled **82**.

COIL TYPE	A	B	C	D
MC30 Plug & Socket	36	101	126	195
Heavy Duty Mazak Plug & Socket	36	112	126	195
Standard Terminal Box	36	99	134	211
SS Terminal Box	52	119	151	245
ExnA SS Terminal Box	52	119	151	245
Exd SS Terminal Box	52	119	151	245
Ex e mb SS Terminal Box	52	119	151	245
Piezo Operator	32	72	135	213
Exia SS Terminal Box	52	119	158	259
Exia Std. Terminal Box	36	99	141	225
Exia Plug & Socket	36	125	129	201

	STANDARD
Body and End Caps	Black Anodised Aluminium (Dural)
Spool	Hard Anodised Aluminium PTFE Impregnated
Jet	Brass
Spacers	Glass Filled Acetal
Seals	Nitrile
Spring	Music Wire

	STANDARD
Port Connection Size	1/8" BSP
Working Pressure Internal Pilot Version	3 to 10 bar
Working Pressure External Pilot Version	3 to 10 bar
Minimum External Pilot Pressure	3 bar
Cv Factor	0.4
Flow Rate (at 6 bar with 1 bar pressure drop)	382 l/min
Maximum Ambient Temperature	+80 °C
Minimum Working Temperature	-20 °C

Coil Type	Plug & Socket	Terminal Box	ExnA	Exd	Ex e mb	Exia
Area Class	Safe	Safe	Zone 2	Zones 1 & 2	Zones 1 & 2	Zone 0, 1 & 2
Area Category	N/A	N/A	Ex nA II T4-T6	Exd IIC T3-T6	Ex e mb IIC T4	Exia IIC T6
Ingress Protection	IP65	IP65	IP65	IP66	IP66	IP65
Cable Entry	PG.9	M20 x 1.5	M20 x 1.5 or PG.9	M20 x 1.5	M20 x 1.5	M20 x 1.5
Ambient Temperature	-20 to +80 °C	-20 to +80 °C	-20 to +60 °C	-20 to +80 °C	-20 to +65 °C	-20 to +65 °C
Magnetic Wire Class	H	H	H	H	H	H

*** FURTHER SOLENOID OPTIONS AVAILABLE ON REQUEST**